



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,182	07/11/2003	Jacob Richter	2390/468082	4309
26646	7590	05/04/2005	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			DAWSON, GLENN K	
			ART UNIT	PAPER NUMBER
			3731	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,182

Applicant(s)

RICHTER ET AL.

Examiner

Glenn K Dawson

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-36 is/are allowed.
- 6) ☒ Claim(s) 18-27 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03-10-2005.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03-10-2005 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18,25,26 and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Graflind-4788417.

Graflind discloses an electrical heating pad having an electrical circuit establishing current flow causing heat to be produced by passing it through a resistance. The circuit has means to sense resistance and use this to control the amount of current is delivered to the pad. The circuit also has the ability to switch the current off. The circuit could have been used to heat a stent and would operate as claimed. However, since the monitoring of the phase change of the stent claimed by the applicant is really only monitoring of the current flow characteristics, the examiner

Art Unit: 3731

contends that all of the positively recited claimed elements are disclosed by Graflind.

See col. 3 lines 50-57 and col. 4 lines 3-9.

Claims 18-20,25,26 and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Sachs, et al.-4695709.

Sachs discloses an electrical circuit for providing current to a resistance to produce heat. Measuring or sensing circuits sense changes in current or voltage. The sensing part of the circuit is used to control the current in order to control the heating. The circuit could have been used to heat a stent and would operate as claimed. However, since the monitoring of the phase change of the stent claimed by the applicant is really only monitoring of the current flow characteristics, the examiner contends that all of the positively recited claimed elements are disclosed by Sachs.

Claims 18-26 and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Potter-4359626.

Potter discloses an electric blanket having a circuit providing current to a heating resistor. The circuit has a means for sensing current or voltage changes. The sensed current or voltage is used to control the amount of current delivered to the resistor to change the heat produced. The circuit also has a shut-off means. The cut-off may be delayed. See col. 1 lines 33-34 and lines 54-59; col. 2 lines 2-9; col. 4 lines 22-36. The circuit could have been used to heat a stent and would operate as claimed. However, since the monitoring of the phase change of the stent claimed by the applicant is really only monitoring of the current flow characteristics, the examiner contends that all of the positively recited claimed elements are disclosed by Potter.

Double Patenting

Claim 27 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 18. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). The examiner is unable to discern any difference in claims 18 and 27 and certainly are not deemed to define an invention of differing scope.

Allowable Subject Matter

Claims 28-36 are allowed.

Response to Arguments

Applicant's arguments filed 03-10-2005 have been fully considered but they are not persuasive.

Applicant has stated in the specification page 20 that it is known that stents which undergo a transition from the martensite phase to the austenite phase also exhibit sharp changes in resistance, voltage drop and current draw. This is an inherent property of nitinol. The claims are drawn to a circuit which is able to detect these changes, and regulate the flow of current to the stent to stop heating the stent, either immediately or after a short period of time.

Therefore, the circuit claimed is merely detecting changes in either or all of resistance, voltage or current and using this detection to control (or stop) the flow of current. The circuit does not know what the changes sensed mean. The circuit is not

Art Unit: 3731

really monitoring a phase change of the stent, but rather is merely measuring the current profile of the circuit. The circuit only senses these parameters, and upon sensing a sufficient change in the parameters, adjusts or stops the current delivered. The fact that applicant's circuit is attached to a stent is entirely irrelevant in determining the patentability of the claims at hand. The claims are not limited to monitoring a phase change of a stent. In actuality, the applicant's device is not even directly monitoring a phase shift of the stent. The claims are limited to a circuit "adapted" to do this function. It is accomplished by monitoring the characteristics of the current in the circuit. Applicant has decided to associate the change in the current characteristics to a phase change of the stent. It could have just as well have been associated with sensing whether a person using a heating blanket were still covered by the blanket, as is done by Potter. The circuit is nothing more than the collection of chips, op amps, transistors, resistors, capacitors, diodes.... etc. The patentability of such a circuit can in no way be determined by what the circuit is attached to.

Any electrical heating circuit which has means to sense the above parameters of the circuit, and then use the detecting of a change in these parameters to change the amount of current delivered to the circuit would read on the claims at issue.

Graflind discloses a circuit which has sensors to sense resistance change; if the resistance changes by a sufficient magnitude, indicating a change in temperature, an alarm is triggered and the current delivered to the pad is ceased. The examiner maintains that if one took the heating and control circuit of Graflind and attached it to a nitinol stent and then set the upper limit of the resistance to a point corresponding to

Art Unit: 3731

that achieved when the stent changed states, that the control circuit would stop the current delivery at that point.

Sachs senses changes in current or voltage and uses this information to control the heating circuit in a manner similar to Graflind.

Potter has an electrical heating circuit having a sensing circuitry built in which monitors the resistance in the current flow, and upon sensing a drastic change in the resistance or current flow, triggers the circuit to stop delivering current to the heating circuitry. If attached to a nitinol stent, the heating circuit would simply deliver current to the stent thus causing it to heat up. Upon the stent changing to the austenite phase, causing a drastic change in current flow or resistance in the heating circuit, the sensing circuitry, through monitoring of the current flow of the heating circuit, would sense the change in the current flow (which in this case would be representative of the phase change of the stent) and shut off the current to the heating circuitry.

The examiner believes that all of these occurrences would inevitably occur upon attaching the circuit of Potter to a nitinol stent based on common scientific knowledge of circuits. A circuit will only produce a particular output based on a particular input. A circuit acts very predictably given a particular input. The examiner is unable to see any difference in the claimed circuit and the Potter circuit. The only difference is what the circuit is attached to.

The examiner contends that the only subject matter actually recited in the claims is of a circuit for establishing current flow which is adapted to monitor the phase change of a stent and control current flow as a function of the phase change. Since the claims

Art Unit: 3731

do not positively recite the stent, the specification provides for the actual monitoring of the conditions of the current flow and it is this which is used to determine phase change. Therefore, in actuality, the positively claimed monitoring circuitry actually is only limited to monitoring the current flow conditions, and as a function of a change in such controlling the flow of the current. The examiner is not providing a rejection based on his own personal knowledge, but rather is only using applicant's own specification as a template to determine exactly what is being positively recited. The examiner now contends that as outlined above, the prior art discloses everything which is actually positively recited in the claims. For clarity sake, the examiner has included arguments which explain how the prior art circuit would react if placed in applicant's environment; however, this is not necessary to reject the claims.

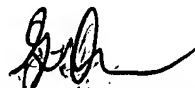
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn K Dawson whose telephone number is 703-308-4304. The examiner can normally be reached on M-Th 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on 703-308-2154. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Glenn K Dawson
Primary Examiner
Art Unit 3731

Gkd
01 May 2005